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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,233	12/02/2003	Simon Robert Walmsley	PEA06US	4679

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SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER	
LEBRON, JANNELLE M	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,233	WALMSLEY ET AL.	
	Examiner	Art Unit	
	Jannelle M. Lebron	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/02/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/02/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: the word "minimize" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumar (US Patent 6,283,572).

4. Kumar discloses a "method of compensating for an inoperative nozzle in a printhead, the method comprising the step of:

(a) mapping dot data intended for the inoperative nozzle into one or more operative nozzles of the printhead [column 6, lines 63-66]."

5. Regarding claim 2, Kumar discloses a method of compensating for inoperative nozzles that maps "the dot data intended for the inoperative nozzle into a nozzle that

will print a dot on print media close to a position at which the inoperative nozzle would have printed a dot had it been operative [column 7, lines 58-64]." It is shown that an inoperative nozzle will be replaced by an operative nozzle in the same row.

6. Regarding claim 4, Kumar discloses a method of compensating for inoperative nozzles "that includes the substeps of:

(i) determining one or more operative nozzles capable of printing a dot on print media close to a position at which the inoperative nozzle would have printed a dot had it been operative [column 9, lines 7-10]; and

(ii) mapping the dot data from the inoperative nozzle to an operative nozzle determined in substep (i) [column 7, lines 58-64 and column 9, lines 12-15]."

7. Regarding claim 5, Kumar discloses a method of compensating for inoperative nozzles "wherein in the event more than one operative nozzle is determined in substep (i), the dot data is remapped to one of the operative nozzles that will print a dot on print media closest to that which would have been printed by the inoperative nozzle [column 9, lines 10-12]."

8. Regarding claim 6, Kumar discloses a method of compensating for inoperative nozzles "wherein, during successive firings of the printhead, the dot data is remapped alternately to operative nozzles that will print a dot on print media either side of that which would have been printed by the inoperative nozzle [column 8, lines 7-9]". To prevent the nozzle from overheating, the dot data needs to be mapped to alternate operative nozzles.

9. Regarding claim 7, Kumar discloses a method of compensating for inoperative nozzles "whereas during successive firings of the printhead, the dot data is remapped randomly, pseudo-randomly, or arbitrarily to operative nozzles that will print a dot on print media either side of that which would have been printed by the inoperative nozzle [column 8, lines 7-9]." Selecting a nozzle such that no nozzles fires too much depends on which nozzles are inoperative and which nozzles are firing meaning that a replacement nozzle is selected pseudo-randomly.

10. Regarding claim 8, Kumar discloses a method of compensating for inoperative nozzles with "the printhead including a plurality of sets of the nozzles [each row on table I] for printing a corresponding plurality of channels of dot data, wherein step (a) includes the substep of remapping the dot data intended for the inoperative nozzle into one or more operative nozzles from the same set [column 7, lines 58-64 and Table I]."

11. Regarding claim 9, Kumar discloses a method of compensating for inoperative nozzles that "includes the substep of mapping the dot data into one or more operative nozzles that will print a dot on print media close to a position at which the inoperative nozzle would have printed a dot had it been operative [column 7, lines 58-59 and Table I]." Table I shows that the compensating operative nozzle is located in the same row as the inoperative nozzle.

12. Regarding claim 13, Kumar discloses a method of compensating for inoperative nozzles "wherein a plurality of dot data intended for a corresponding plurality of inoperative nozzles are mapped to operative nozzles [column 6, lines 63-66]."

13. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballyns (US Patent 4,932,232).

14. Ballyns discloses a "method of compensating for an inoperative nozzle in a printhead, the method comprising the step of:

(a) mapping dot data intended for the inoperative nozzle into one or more operative nozzles of the printhead [column 5, lines 45-49]"

wherein step (a) "includes the substep of mapping the dot data intended for the inoperative nozzle into a nozzle that will print a dot on print media immediately adjacent a position at which the inoperative nozzle would have printed a dot had it been operative [column 5, lines 51-58]."

15. Claims 1, 8, and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Eckard (EP 0 983 855 A2).

16. Eckard discloses "a method of compensating for an inoperative nozzle in a printhead, the method comprising the step of:

(a) mapping dot data intended for the inoperative nozzle into one or more operative nozzles of the printhead [column 5, lines 47-53]";

Eckard also discloses a method of compensating for an inoperative nozzle with "the printhead including a plurality of sets of the nozzles for printing a corresponding plurality of channels of dot data [each group of nozzles corresponding to a specific color will be taken as a set]."

17. Regarding claim 10, Eckard discloses a method of compensating for an inoperative nozzle that "includes the substep of mapping the dot data intended for the

inoperative nozzle into one or more operative nozzles including at least one nozzle from a different one of the sets [column 5, lines 54-57]."

18. Regarding claim 11, Eckard discloses a method of compensating for an inoperative nozzle that "includes the substeps of: determining which combination of one or more available operative nozzles near the inoperative nozzle will minimize perceived error in an image that the dot data forms part of the determination being performed on the basis of a color model [column 6, lines 15-22]; and

mapping the dot data intended for the inoperative nozzle to that combination of one or more operative nozzles [column 6, lines 9-13]."

19. Regarding claim 12, Eckard discloses a method of compensating for an inoperative nozzle method "wherein the inoperative nozzle is associated with a black print channel, and wherein step (a) includes remapping the dot data intended for the inoperative nozzle into a plurality of operative nozzles in other color channels to produce a process black output at or adjacent a location on print media where the inoperative nozzle would have deposited a droplet of a black printing substance in accordance with the dot data [column 6, lines 20-22]."

20. Regarding claim 14, Eckard discloses, "a printer controller configured to implement the method of claim 1 [column 4, lines 28-31]".

21. Regarding claim 15, Eckard discloses "a printer controller configured to implement the method of claim 1 to a printhead comprising a plurality of the nozzles [column 4 - lines 28-31, column 5 - lines 21-23, and figure 6]."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jannelle M. Lebron whose telephone number is (571) 272-2729. The examiner can normally be reached on Monday thru Friday 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JML